

AMENDMENTS TO THE CLAIMS

This listing will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) Apparatus for treating highly corrosive agents, comprising a tube bundle (14) heat exchanger (10), structured to carry out a heat exchange between two fluids one of which is highly corrosive and flowing inside of said tube bundle (14), ~~characterized in that~~ wherein said tube bundle (14) comprises at least one titanium or titanium alloy tube (14a), coated with a layer (25) of zirconium or zirconium alloy;

wherein said at least one titanium or titanium alloy tube and said zirconium or zirconium alloy coating layer are bonded together metallurgically or through welding.

2. (Currently amended) Apparatus according to claim 1, ~~characterized in that~~ wherein said at least one titanium or titanium alloy tube (14a) is coated on the inside by said zirconium or zirconium alloy layer (25).

3. (Currently amended) Apparatus according to claim 1, ~~characterized in that~~ wherein said at least one titanium or titanium alloy tube (14a) has a thickness between 1.0 and 10 mm, and in that said zirconium or zirconium alloy coating layer (25) has a thickness between 0.3 and 2.0 mm.

4. (Currently amended) Apparatus according to claim 1, ~~characterized in that~~ wherein said at least one titanium or titanium alloy tube (14a) is only partially coated with said zirconium or zirconium alloy layer (25).

5. (Currently amended) Apparatus according to claim 4, ~~characterized in that~~ wherein said zirconium or zirconium alloy layer (25) coats solely an end portion (14b) of said heat exchange tube (14a).

6. (Currently amended) Apparatus according to claim 3, ~~characterized in that~~ wherein said zirconium or zirconium alloy layer (25) extends in said at least one titanium or titanium alloy tube (14a) starting from an entry end (26) towards an opposite end (27) thereof, for a portion between 5 and 30%.

7. (Cancelled)

8. (Currently amended) Apparatus according to claim 7, ~~characterized in that~~ 1, wherein said at least one titanium or titanium alloy tube (14a) and said zirconium or zirconium alloy coating layer (25) are bonded together through hot-drawing.

9. (Currently amended) Apparatus according to claim 1, ~~characterized in that~~ wherein said heat exchanger (10) comprises respective upper and lower tube plates (15,16) for supporting said tube bundle (14), said tube plates (15,16) being made of titanium or titanium alloy, or being coated with a titanium or titanium alloy layer.

10. (Currently amended) Apparatus according to claim 9, ~~characterized in that~~ wherein said upper and lower tube plates (15,16) are made of carbon or stainless steel, coated on the outside with a layer of 3-15 mm of titanium or titanium alloy.

11. (Currently amended) An apparatus according to claim 1, which is a [[S]]stripper for the decomposition of ammonium carbamate in an urea production plant, ~~characterized in that it comprises a tube bundle (14) heat exchanger (10) comprising at least one titanium or titanium alloy tube (14a), coated with a zirconium or zirconium alloy layer (25).~~

12. (Currently amended) An apparatus according to claim 1, which is a [[C]]condenser for the condensation of ammonia and carbon dioxide into ammonium carbamate in an urea production plant, ~~characterized in that it comprises a tube bundle (14) heat exchanger (10)~~

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~~comprising at least one titanium or titanium alloy tube (14a), coated with a zirconium or zirconium alloy layer (25).~~